

HOLY SOULS RC PRIMARY SCHOOL

Pride in our achievements



Mathematics

Vision Statement

Holy Souls School is a Catholic School where we share our life in Christ in the growing knowledge that Jesus loves us. Our school is a place where everyone is able to feel welcomed, valued, secure, loved and happy. Everyone who comes into our school will be treated with respect. We remember that Jesus said, 'Treat others as you would like them to treat you'

Date Agreed by Governors: 12th December 2024

Last Updated: September 2024

Governor Review Date: Autumn Term 2027

Holy Souls RC Primary School

Mathematics Policy

Introduction

This document is a statement of the Intent, Implementation and Impact for the teaching and learning of Mathematics at Holy Souls Primary School. It was developed during the Autumn term of 2024 through a process of consultation with teaching staff and Governors. A schedule for the review of this, and all other policy documents, is set out in the School Development Plan.

Mission Statement

“To love one another as I have loved you” is at the heart of our Mission Statement. Holy Souls is a place where we share our life in Christ, in the growing knowledge that Jesus loves us. Our school is a place where everyone is able to feel welcomed, valued, secure, loved and happy. The Mathematics Policy takes into account our Mission Statement, which has the love of God and one another as its roots and where every child is seen as a special and valued individual with talents to be developed in order to achieve their full potential.

Purpose of study

Mathematics is important in everyday life. It is integral to all aspects of life and with this in mind, we endeavour to ensure that children develop a healthy and enthusiastic attitude towards mathematics that will stay with them.

“A high-quality mathematics education provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.”

(Mathematics programmes of study: Key Stages 1 and 2 National Curriculum in England, September 2014).

Role of the Co-ordinator

- Take a lead in policy development and planning of the Mathematics curriculum.
- Prepare an annual review of the subject and in consultation with staff prepare a development plan for the next year.
- Support colleagues in the implementation of plans and assessment activities.
- Monitor teacher assessment.
- Monitor and challenge the progress of the mathematics curriculum and advise the Headteacher and Governors on action needed.
- Take responsibility for the purchasing and organisation of resources.
- Keep up to date with developments in the mathematics curriculum and disseminate information to colleagues as appropriate.
- Lead staff meetings to develop teacher knowledge.

Intent

The intent of our Mathematics curriculum is to design a curriculum that is accessible to all and will challenge the development of every child's academic ability. We deliver lessons that are fun, challenging, creative, inclusive, and ambitious. We want children to make connections between Mathematical fluency and be competent in answering advanced real-life mathematical problems. We want our children to understand the importance of Mathematics and that it is necessary for our day-to-day life, the importance of it in Science, that it is critical in Computing and Engineering, and for most forms of future employment. We want our children to be lifelong learners and know that Mathematics will be a part of their life for generations to come.

Our curriculum intent is to help children to make sense of the world around them through developing their ability to calculate, to reason and to solve problems. The National Curriculum (2014) sets out the aims of Mathematics which are to ensure children:

- Become fluent in the fundamentals of Mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils have conceptual understanding and can recall and apply their knowledge rapidly and accurately to problems.
- Reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- Can solve problems by applying their mathematical skills to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

At Holy Souls we aim for children to achieve this by being able to:

- Promote enjoyment and enthusiasm for learning through practical activity, exploration and discussion.
- Develop a thorough knowledge and understanding of numbers and the number system.
- Explore features of shape and space, and to develop measuring skills in a range of contexts.
- Develop a positive attitude towards Mathematics and an awareness of the fascination of Mathematics.
- Develop competence and confidence in mathematical knowledge, concepts and skills.
- Develop an ability to solve problems, to reason, to think logically, to work systematically and accurately.
- Develop an ability to work both independently and in co-operation with others.
- Communicate their mathematical ideas succinctly and with increasing sophistication.
- To be able to apply Mathematics across the curriculum and in real life situations.
- To understand Mathematics through a process of enquiry and experimentation.
- To enable all pupils to have equal access to mathematics and to experience success in their work.

Implementation

Mathematics is a core subject in the National Curriculum. The Mathematics Programmes of Study: Key Stages 1 and 2, National Curriculum in England, September 2014, sets out the statutory requirements for each Year group and provides non statutory notes and guidance. At Holy Souls, we use this document alongside Lancashire's Red Rose Mastery Maths scheme to inform our planning.

A typical lesson in Years 1 to 6 following the Red Rose Mastery Maths scheme would involve:

- A 'Starter Activity' to allow children to revisit, practice and refine previously learned content, to support long term memory retention, as well as developing children's mathematical fluency.
- An 'Initial Problem' in which children are introduced to the learning through a context. The children discuss how their existing knowledge can be applied to the context. Ideas and approaches are shared where misconceptions are identified and addressed, and effective approaches are shared and learned by the whole class.
- 'Guided Learning' is interactive using effective questioning, which leads the children to identify for themselves how to be successful with their learning. This is supported using both conceptual and procedural variation and short tasks for the children to complete before moving on to the next step in learning.
- An 'Independent Learning' task for the children to apply the learning from the 'guided' parts of the lesson. This task includes questions that build children's understanding and fluency using variation and will also involve different elements of reasoning and problem solving.
- A 'Deeper Learning' task is included to allow some children to take their understanding to an even greater depth than what would be expected. These tasks are often in the form of more complex reasoning or non-routine problem-solving questions. Children complete these tasks in their Mathematics jotters.
- Throughout the lesson, children's thinking is supported and extended through the deliberate use of questioning by the adults.

A variety of approaches are used within our lessons, including practical exploration, group discussion, paired work and individual work.

Early Years Foundation Stage

Mathematics is taught within the Early Years Foundation Stage under one of four specific areas (Literacy, **Mathematics**, Understanding the World and Expressive Arts and Design). Mathematics involves providing children with opportunities to develop and improve their skills in counting, understanding and using numbers, calculating simple addition and subtraction problems; and to describe shapes, spaces and measures.

The Statutory Framework for the Early Years Foundation Stage: Setting the standards for learning, development and care for children from birth to five DfE Crown 2014 states the level of progress that children should be expected to have attained by the end of the

EYFS in the Early Learning Goals for Mathematics, to ensure that children are ready to access the National Curriculum in Year 1. At Holy Souls, our EYFS use this document alongside Lancashire's Red Rose Mastery Maths scheme to inform our planning. The only exception to this, is Tiddly Tots, who currently follow 'Mastering the Curriculum'.

A typical lesson in EYFS following the Red Rose Mastery Maths scheme would involve:

- A 'Key Skills' practice with the whole class. This introduces a weekly focus that the children will focus on, allowing children to revisit, practice and refine previously learned content, to support long term memory retention. This also develops children's mathematical fluency and introduces them to new vocabulary, to support their language development.
- A 'Guided Learning' small group task which is interactive using effective questioning and scaffolding, leading the children to apply new vocabulary and identify for themselves how to be successful with their learning. These small group tasks are no longer than 10 minutes long and always include lots of practical opportunities for the children to apply their learning, using manipulatives.
- An 'Extension Task' is included to allow some children to take their understanding to an even greater depth than what would be expected.
- The learning is then reinforced through carefully planned Continuous Provision activities that link to the weekly focus. This helps the teacher inform their future planning and check levels understanding.

Development of subject specific vocabulary

All Mathematics lessons strive to ensure that each child is confident in using correct Mathematical vocabulary. Red Rose Mathematics plans ensure that staff are aware of the correct new vocabulary that is to be taught, but also recap on previously acquired vocabulary, ensuring that this has 'stuck' into their long-term memory. Furthermore, staff are encouraged to ensure that their Mathematics working walls are language rich, which will support pupils in remembering the correct Mathematical vocabulary.

Formative Assessment

Teachers use their professional judgement to decide what children need to learn and when to move on to the next step of learning. Teachers use effective questioning to determine the extent of children's understanding before deciding on what the children need next (support, extension, next step).

Summative Assessment

Children in Years 1 – 6 are assessed at the end of each term, using Lancashire Curriculum assessments that consist of an arithmetic paper and reasoning paper. This allows teachers to check a child's progress towards meeting end of year expectations and organise further support where necessary. At the end of each half term, children complete 'Learning Checks' from the Red Rose Mastery Maths scheme that consist of a range of questions based on what children have learned during that half term. These allow teachers to see how well the learning has been stored in their long-term memory.

In addition, during May each year, children in Year 6 undertake National Curriculum assessments. Although no longer statutory, children in Year 2 also undertake the National

Curriculum assessments around the same time. Year 4 also undertake the statutory multiplication tables check (MTC) in June each year.

Resources

There is a range of resources to support the teaching of Mathematics within each class. Staff are encouraged to use practical and visual models to support children's learning in Maths. Other resources are stored centrally in the resource area and in the 'Bright Sparks Room', mainly in labelled boxes. Teachers are responsible for collecting and returning them to the correct area. Teachers inform the Maths co-ordinator of resources they need.

Equal Opportunities/ Inclusion

We are committed in our Mission Statement to develop the talents of every child regardless of their gender, race, or cultural background. We ensure that through careful planning with differentiation and the use of support, we will meet the needs of all our children.

During each phase of a Maths lesson, staff are expected to circulate around the classroom, noting down the pupils who may require additional support. A quick intervention task might then be provided to those who require additional support during the first few minutes of the 'Independent Learning' section of the lesson. These questions will be based on those provided during the 'Guided Learning'.

Further interventions may be used throughout the school day. Assembly times are essential to provide short interventions for pupils who have struggled to grasp a particular concept. Teachers may also use this time to pre-teach certain skills, which will support them with assessing where they might pitch the lesson to the rest of the class.

Special Educational Needs and Disabilities (SEND)

The SENDCO is informed of any children who are having difficulty accessing the Mathematics Curriculum at an age-appropriate level. Quality First Teaching is considered an entitlement for all pupils. Each teacher ensures that appropriately differentiated tasks or support are available to those with SEND needs within lessons. We recognise the importance of building children's self-esteem and will reinforce what they do positively.

Talented and Gifted

Each Mathematics lesson within the Red Rose Mastery Maths scheme has been designed to provide even further challenge for those pupils who grasp concepts easily. Any pupil who successfully completes their 'Independent Learning' will then be provided with a 'Deeper Learning' challenge. These are used to extend learning further, allowing pupils to identify various patterns and relationships, which will extend their understanding through reasoning and problem solving.

Impact

The impact of our curriculum is continually reviewed to ensure that our teaching and learning in Mathematics is continuing to improve, through analysing successes and areas of development.

Through using a 'mastery approach', to the teaching and learning of Mathematics at Holy Souls Primary School, we aim for children to be fluent in the fundamentals of Mathematics with a conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. They should have the skills to solve problems by applying their Mathematics to a variety of situations with increasing sophistication, including in unfamiliar contexts and to model real-life scenarios. Children will be able to reason mathematically by following a line of enquiry and develop and present a justification, argument or proof using mathematical language.

Use of feedback to improve learning

Mathematics work is marked using a combination of live marking, self-marking and peer marking (as set out in our Marking and Feedback Policy). Live marking is considered best practice as it gives immediate feedback with the child in the lesson. This gives pupils an opportunity to respond immediately so that any misconceptions can be tackled at that point.

Monitoring of Impact (Including the role of governors)

Monitoring of the standards of children's work and of quality of teaching in Mathematics is the responsibility of the subject leader, supported by both the head teacher and link governor. 'Walk throughs', book scrutinies and pupil discussions take place regularly throughout the year, to provide senior leaders with an accurate picture of Mathematics, its strengths and areas for development.

The work of the subject leader also involves supporting colleagues in the teaching of Mathematics and being informed about current developments in the subject.

Progress Monitoring

Progress is monitored using both teacher assessment and the test levels achieved. This information is used to set the targets throughout the year. The Co-ordinator monitors children's progress through looking at books, plans and observing lessons. In addition, at the end of each term the co-ordinator analyses whole school iTracker data on pupils' attainment and progress. The Key Stage 1 Leader and the Key Stage 2 Leader also hold Pupil Progress meetings at the end of the Autumn and Spring terms with the teachers in their Key Stage to monitor the progress of the children in each Key Stage. Information is shared with Senior Leadership Team (SLT) and SENDCos to determine how to challenge or support children making exceptionally good or weak progress.

Impact of Mathematics Teaching in Other Subject Areas

Throughout the whole curriculum, opportunities exist to extend and promote Mathematics in cross curricular projects, especially in Science and ICT. They both offer ideal opportunities to develop children's mathematical understanding. Teachers seek to take advantage of all these opportunities.

Information and Communication Technology

This is an integral part of the Mathematics curriculum. The interactive whiteboard is used in all daily lessons to introduce concepts and to enable children to demonstrate their understanding.

Timetables Rockstar's is an online subscription purchased for Holy Souls to support the teaching and learning of timetables in school and at home.

Children in Key Stage 1 also use 'Hit the Button' which is an app that supports the teaching and learning of number both in school and at home.

Nina Smith
Mathematics Co-ordinator
September 2024